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What Happens When the Seesaw App is Used in a Kindergarten Classroom?

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What Happens When the *Seesaw* App is Used in a Kindergarten Classroom?

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Abstract

Parent-teacher relationships can make or break a student's academic career. It is possible that taking advantage of parents' media-connectedness to form positive relationships may be more effective than more traditional methods like hand-written notes, phone calls, or emails. In this study the researcher sought to understand what happens in a kindergarten classroom when one technology in particular was used facilitate communication: *Seesaw* (a digital portfolio app used to post pictures and videos of children as well as communicate with parents using its private messaging feature). Data was collected through parent surveys, observations, and interviews of parents, students, and teachers. Analysis of the data included the use of the constant comparative method and coding all quantitative data for themes. It was found that *Seesaw* allowed parents to get an accurate idea of what their children were doing at school during the day, opened the lines of communication between parents, teachers, and students, and helped teachers communicate with traditionally hard-to-reach parents. Although much of the feedback from parents and teachers was positive, some potential drawbacks and suggestions for changes to the app are mentioned.

What Happens When the *Seesaw* App is Used in a Kindergarten Classroom?

A fly on the wall of the teachers' lounge might hear some of these things: "His parents just don't care about what we do here. Her mom never knows what's going on at school. They're at work all the time, so they hardly ever even see their kids. She never turns anything in on time. I just can't get these kids' parents to show up for a teacher conference! I feel like my students' parents have no idea how their kids are doing at school until it's too late to do anything about it."

Most educators can probably say that they have heard other teachers say these things, and maybe can admit to thinking or saying some of these things about their students' parents, too. Even though my experience with parent-teacher communication was limited, before going into my clinical-teaching placement, I had already grown weary from hearing the way other teachers speak about the parents of the students in their classes, the same people who had the potential to be their biggest cheerleaders. I was determined to communicate in a more positive way with my students' parents.

After hearing about the *Seesaw* app and its potential to involve parents in a way that is not typical in your average classroom, I was eager to give it a try in my own classroom. *Seesaw* is a digital portfolio app made to share pictures, videos, and notes in students' individual portfolios. There is also a private messaging feature to use with parents and teachers. For older kids with access to technology, students are able to make their own posts on *Seesaw* for their parents and teachers to see. People who are connected on the app can also like or comment directly on posts, but only on posts that they have permission to see. For instance, after a parent is invited to join the app, he or she can only view, like, and comment on posts their child is tagged in. My co-teacher, Mrs. Phalange (all names have been replaced with pseudonyms), felt much the same way I did about revamping parent-teacher communication and was excited to see

how *Seesaw* could transform the way we were able to interact with parents. Together, we set out to discover what happens when *Seesaw* is used in a kindergarten classroom.

Purpose

Rigsby Early Childhood Center (RECC) is part of Mills Independent School District in west Texas. It is located on the southwest side of Mills, Texas, which has a population of about 123,000 people. The campus is one of six campuses in the district. Mills ISD is unique in that each campus is split into particular grade levels. For instance, the Early Childhood Center houses only Pre-K and kindergarten, while the intermediate school houses only third and fourth grade. At the Rigsby ECC campus, there are 434 students. Of these students, 3.7% are African-American, 0.7% are Asian, 24.4% are Hispanic, 0.5% are Pacific Islanders, 65.7% are White, and 5.1% are of mixed race. Within the population of RECC, 18.9% are considered “at-risk,” 24% are considered economically disadvantaged, and 1.6% speak English as their second language. When it comes to the teachers on campus, 80.4% are White and 19.6% Hispanic. For every teacher, there are about 17 students.

As a requirement of the year-long Master’s of Education program I was enrolled in, I was to conduct an action research study in the kindergarten classroom in which I student taught for an entire school year. Before school began, I introduced *Seesaw* to my co-teacher, which she agreed to try in our classroom without hesitation. Because neither of us had ever implemented its use in a classroom before, I was interested in seeing what would happen when the parent application *Seesaw* was used in a kindergarten classroom. *Seesaw* is an application that can be used on a smartphone or computer. It serves as a way to put together a digital journal for each student in the class. Artifacts like pictures, videos, drawings, and notes can be added to the students’ journals by either the teacher(s) or the students themselves. Parents may view only the journal of

their own child, and they may “like” or comment on artifacts posted in the journals. Teachers may send private messages directly to parents, or they may send “announcements,” which go to every parent connected to the application. Because of the age of the students and the availability of technology in my particular class, *Seesaw* was used mainly by teachers as a tool to share student learning and information with parents.

My interest was to see what happens when *Seesaw* is used in a kindergarten classroom. More specifically, I wanted to understand parent, student, and teacher perceptions of the application and how it facilitated communication between parents, teachers, and students. I was also interested to see how the parents of my English Language Learners felt about using the app. It is known that positive, frequent parent communication and involvement increases children’s achievement (Henderson & Berla, 1994). If it is found that this application is successful in improving communication, it would be an application worth sharing with others and using in the future.

Related Literature

Throughout the years, research has highlighted the importance of parent involvement in molding successful students (Shirvani, 2007). Recently, with the introduction of new technologies, teachers have found that facilitating a positive parent-teacher relationship may be easier than ever. With research indicating that parents seek a form of communication that is personal, asynchronous, and almost immediate, the *Seesaw* app may be the solution (Thompson, Mazer, & Grady, 2015).

The Magic of a Positive Parent-Teacher Relationship

Perhaps the most sure-fire way to ensure a child is successful in school is to encourage parent involvement and to build a positive parent-teacher relationship. This has been well-

established throughout the years by researchers like Henderson and Berla (1994) who found that some of the many benefits of positive and frequent parent-teacher communication include higher graduation rates, higher test scores, and overall increases in children's achievement in school. Other than academic success, strong parent-teacher relationships were shown by Shirvani (2007) to lead to more positive student attitudes as well as decreases in challenging behaviors (Kaiser & Rasminsky, 2017). Through their study, Kraft and Rogers (2015) found that all of these outcomes could be achieved simply by sending a one-sentence note home weekly with each student. Even though this cost- and time-effective approach to parent-teacher communication was simple, its results were complex. Like magic, parent involvement and positive parent-teacher relationships can transform students into higher-achieving, better-behaving version of their previous selves. However, many teachers may be left wondering how this can best be achieved in a time-effective way. The answer may be found in the ever-changing world of technology.

Letting Our Fingertips Do the Talking

With new technologies introduced every day, the ability to facilitate communication between parents and teachers is literally at our fingertips, making it easier than ever for parents to be involved. In her study regarding increasing parent involvement through technology, Olmstead (2013) confirmed that "both parents and teachers perceived that technology is an effective tool to promote parent involvement" (p. 35). With so many parents already attached to their smartphones and social media accounts, utilizing technology to keep parents informed of student progress is the logical next step to improving parent-teacher communication (PaperClip Communications, Inc., 2013). Many social media sites like *Facebook*, *Twitter*, and *Pinterest* are

used within the classroom context, but few are designed with education in mind, making privacy, security, and appropriateness a potential issue (McMeans, 2015).

When it comes to the ideal form of communication, Thompson, Mazer, and Grady (2015) found that parents seek something that is informative but simple, asynchronous but immediate, and personal but not face-to-face. With this laundry list of requests, it is hard to find one means of communication that meets all parents' needs. However, tossing aside sites like *Facebook* and *Twitter*, out of the Internet emerges the ultimate form of social media, designed specifically to meet the needs of parents, teachers, and students alike: *Seesaw*.

The Case for *Seesaw*

Relatively new in the realm of education, *Seesaw* is an online application that serves as a platform for digital student portfolios and parent-teacher communication. Through *Seesaw*, teachers and students are able to post pictures, videos, notes, files, or links to share with parents connected to the app. To maintain the highest levels of security within the app, teachers must approve everything parents or students try to do within the app, including comments on posts or attempted parent connections. This feature is designed to keep student information safe; no one can access a student's portfolio without first receiving permission from the teacher. In addition to this important safety feature, it is also impossible for parents to see any journal artifacts that their child is not tagged in, which protects the privacy of other children in the class. Besides building a digital portfolio, teachers are capable of sending out class or parent announcements, sending direct, private messages to parents, and grading student work, all within the app.

Similar to the digital portfolio feature of *Seesaw*, Higgins and Cherrington's (2017) study investigated the use of an ePortfolio to keep families informed of student improvement. The study showed that families enjoyed this method of staying informed because of the meaningful

interactions they were able to have with teachers, the support they were able to give their children at home, and because of how easy it was to access. A special bonus was distant parents' and extended family's ability to stay connected with the child regardless of where they were (Higgins & Cherrington, 2017). This is promising news for *Seesaw* because, in addition to the digital portfolio, the app features instant messaging and in-app translation to more than 50 languages, which means that *Seesaw* fulfills parents' wishes when it comes to ideal parent-teacher communication: ease, immediacy, and a personal touch (Thompson, Mazer, & Grady, 2015).

Schools that have implemented the use of *Seesaw* have seen great results when it comes to parent-teacher communication and parent involvement. According to Seesaw Learning, Inc.'s 2017 study, out of 400 administrators surveyed who had implemented *Seesaw* school-wide, 97% felt it helped develop a better relationship between the school and the parent community, 91% saw an increase in parent involvement since implementing *Seesaw* and enjoy using *Seesaw* to track parent engagement, and 88% of administrators said it is easier for their teachers to communicate with parents using *Seesaw* than other methods they've tried.

While some research has shown the possible benefits to implementing a program similar to *Seesaw* and administrator perceptions of the app's success, parent, teacher, and student perceptions of the app is a topic that has yet to be delved into. Do parents talk to their students about what they see on the app? Do teachers think *Seesaw* is the ideal parent-teacher communication tool? Do students like that their parents are able to see what they are doing in class? In addition, the perceptions of *Seesaw* from parents for whom English is a second language have not been studied either. Do these parents get more out of parent-teacher communication when they are able to translate teacher comments into their native language? To

fill in the current gaps in research available, my research sought to answer these questions and more.

What I Did

With the goal of understanding parent, teacher, and student perceptions of the use of *Seesaw* to facilitate communication, it was important that I collected data from all three parties. To collect a good range of data, I surveyed and interviewed parents, interviewed my co-teacher, and interviewed and observed my students. Throughout the data collection process, data was analyzed through the use of the constant comparative method (Hubbard & Power, 2003). Data was then coded using level I and level II codes (Tracy, 2013).

Participant Selection

Participants were selected from the kindergarten class with which I was student teaching. The class was made up of 20 students during the data collection period. The class was made up of 14 boys and six girls. Compared to the rest of the campus, the class was quite diverse. The ethnic composition of the class included 11 Caucasian students, three Hispanic students, two African-American students, two Asian students, and two students of mixed race. Of the 20 students, five students spoke English as a second language and six qualified for free or reduced lunch prices.

Because the study was focused on perceptions of the use of *Seesaw* to facilitate communication, only parents connected to their students on the app were asked to participate in the study. An information letter describing the study was sent home to each student who had a parent connected to them on *Seesaw* along with a parent consent form, student consent form, and FERPA release form. Out of the 18 parents asked to participate, 13 agreed, and out of the 11 students asked to participate, nine were given parent consent and gave their assent to participate

in the research. Students whose parents returned the aforementioned forms were then asked to sign an assent form to agree to participate in the study. Surveys were sent to each parent who agreed to participate (see Appendix A), and five interview participants were chosen using purposive sampling (Patton, 1990). Parents who returned the survey and were one of the most active *Seesaw* users according to the app's weekly report were asked to participate in an interview. The students of the parents chosen were interviewed as well. In addition to parent and student interviews, my cooperating teacher was interviewed also.

Data Collection

The data collection period lasted four weeks to allow parents plenty of time to return the necessary forms and to schedule interviews if chosen. Only parents who were connected to their student on the *Seesaw* app were given a survey. The purpose of the survey was to evaluate parents' past experiences with using technology to communicate with their children's teachers as well as to gain an understanding about what they like and dislike about the *Seesaw* app.

Based on the responses to the surveys (see Appendix B), using purposive sampling, I picked five parents to interview (Patton, 1990). To get a good range of responses from parents, I chose one parent whose native language was not English, one parent who had prior experience with the use of technology to communicate with teachers, and one who had no prior experience with the use of technology to communicate with teachers. The other two parents included were two of the most active parents in the class. Parents were interviewed once for 15-20 minutes about the ways they use *Seesaw* and the conversations spurred with their children as a result (see Appendix C). Student interviews were chosen based on parent interviews; the children of the parents chosen were asked to participate. Students were interviewed once for 5-10 minutes about what they knew about *Seesaw* as well as what conversations with their parents in regards to the

school day were like (see Appendix C). In addition to parent and student interviews, I interviewed my co-teacher once for 20-30 minutes about her past experiences with communication with parents compared to communication using *Seesaw* (see Appendix C).

During this data collection period, I also kept a teacher journal daily (see Appendix D). I wrote in my journal on my laptop right after school about any parent interactions I experienced in person or through the app. If meaningful interactions occurred using the app, I took a screenshot of it to add to my journal, then blocked out any student or parent names to protect their privacy. In addition to the screenshot, I noted the context of the interaction and why it was significant. Throughout the school day, if *Seesaw* was mentioned by a student, I took note of the student, date, time, and what was said.

Data Analysis

Throughout the data collection process, the constant comparative method was employed, meaning data was analyzed as it was collected in order to adjust to early findings (Hubbard & Power, 2003). Once the data was transcribed and organized, it was coded according to themes using level I and level II codes (Tracy, 2013). Level I codes referred to specific events within the data, while Level II codes covered multiple Level I codes through a broader theme or idea present in the data. To get a good list of codes to use throughout the data, I first analyzed only the first 20 percent of my data to create a base list of codes; I then added additional codes as needed while analyzing the remaining data. In order to better understand and define the codes that arose, I wrote memos about each level II code. After all data was analyzed and coded, I created a codebook in which I listed, defined, categorized, and provided examples for each code from the data (see Appendix E).

What I Found

Through the analysis of my data collected (surveys, interviews, interactions within *Seesaw*, and my classroom journal), four central ideas emerged. Of the four main themes, the most widely-mentioned throughout the data was *Seesaw*'s ability to facilitate communication. Both parents and teachers mentioned that *Seesaw* has allowed them to open the line of communication more than ever before and with more people than before, like siblings, distant parents, and grandparents. Most parents also expressed their appreciation for getting to see what their students did during the school day, especially since some of them had a hard time sending their children to school for the first time. Many parents enjoyed getting this peek into the school day to keep up with student progress as well as behavior. *Seesaw* has also made it possible for teachers to communicate with parents who are normally difficult to reach, like working parents and parents with limited English proficiency. Additionally, through the data I noticed that the pros and cons of the use of *Seesaw* were listed throughout interviews, and many parents and my co-teacher had some ideas on how to change *Seesaw* to make it a better experience for its users. In the following sections, these themes will be explored in further detail.

Opening Up the Line of Communication

The most widespread theme throughout the data was the broadened communication opportunities that arose through the use of *Seesaw*. The use of this app in the classroom not only opened up communication with parents and teachers as intended, but between parents and students and teachers and other family members as well. Because of the nature of the app, it was more far-reaching than we could have expected. The app truly helped facilitate meaningful, frequent communication between teachers, parents, students, and other family members.

Between parents and teachers. Opening up the line of communication between parents and teachers was the primary reason Mrs. Phalange and I decided to implement *Seesaw* in our kindergarten classroom. The private messaging feature of the app and parent ability to like and comment on posts provided an easy, almost effortless way for us to stay in contact with the parents in our classroom. We often used the app to post pictures or videos of class activities, post reminders, send notes, ask for information, and keep families updated on student progress. Sometimes, our posts sparked conversation between parents and teachers within the comments section of the post. As Mrs. Phalange said in her interview, it “created a lot more opportunities for conversation.” Parents enjoyed being able to send us private messages whenever they had questions; Mrs. Johnson said, “I feel like I get a more direct and quicker response to questions that I need.”

Something interesting that Mrs. Phalange noticed since implementing *Seesaw* for parent communication was the number of parents she was able to reach. In the past, she usually had one go-to parent per child that she would contact when needed. Using *Seesaw*, we were able to communicate with a wider set of parents; in many cases, we were able to communicate with both child’s parents. This was helpful in including the entire family in the classroom conversation and in gathering information from both parents rather than just one.

While most parents used *Seesaw* to get additional information about their children and what they did during the school day, one parent in particular used *Seesaw* in order to keep up with his child while he was geographically quite distant from him. Nabi-Yong’s father, Mr. Park, was deployed during the spring semester of kindergarten, which was hard on the whole family. However, Mr. Park emailed Mrs. Phalange and I to thank us for posting frequently in *Seesaw* so that he could keep up with Nabi-Yong even though he was far away; all he needed was an

internet connection. Parents who were not connected on *Seesaw* were also let in on their child's school day because their spouses would often send interesting *Seesaw* posts to them. *Seesaw* opened up the line of communication between teachers and parents regardless of their location or if they were even connected on *Seesaw*.

Between parents and students. Looking through the interviews I conducted with parents and students, I found that almost all of them mentioned using *Seesaw* to help talk about students' days at school. Mrs. Park said, "I like to talk Nabi-Yong about the days of work while watch photos and videos." Other parents used *Seesaw* to engage their children in conversation in similar ways. John said that he shared *Seesaw* posts with Rayda in order to analyze her behavior and come up with areas of improvement. Mrs. Lovegood, Mrs. Standish, and Mrs. Johnson didn't always show the posts on *Seesaw* to their kids, but they did look at the things posted to get a good idea of what to talk to their children about after school. This was especially important when their children couldn't remember what they did at school or claimed that nothing happened at school that day; parents were able to pull examples from *Seesaw* to use as conversation starters with their children. Parents indicated that *Seesaw* helped them have deeper, more meaningful, conversations than they could have in previous years or with other children because of the way *Seesaw* served as a conversation starter by showcasing what students did during the school day.

Between teachers and other family members. Throughout parent and student interviews, participants mentioned including siblings in conversation about the things posted on *Seesaw*. Clayton told me that he showed pictures and videos of himself from *Seesaw* to his brothers Caleb and Tommy after school. Tommy seemed to be especially invested in his brother's school activities; Clayton told me that "Tommy's been asking about the music program since he heard about it." Rayda told me that her little sister, Darla, looked at *Seesaw* posts with

her and that “she [thought] they look so pretty and fun.” Rosie said that her sisters Taylor and Penny enjoyed seeing what she did in class as well. These three families were able to engage in conversation about learning together as a unit; *Seesaw* brought them all together, not just the parents and children connected to the app. Mrs. Lovegood noted that “it [helped] [her] family be a little bit more cohesive and involved with each other’s lives.”

Other extended family members outside the student’s home like aunts, uncles, and grandparents were able to keep up with the students in our class almost in the same way parents could. Parents connected on *Seesaw* said that they often shared posts with other family members so they could get a better idea of what was happening while their children were at school. Of the students in our class with family member connections, only one had a grandparent connected to his journal. She was able to keep up with her grandson in a way that normally wouldn’t be available to a grandparent (see Figure 1). Mrs. Phalange and I reflected on the fact that only one extended family member was connected to our class on *Seesaw* and decided that in the future we would make parents more aware of this as an option; many parents indicated that they did not realize they were allowed to add other family members to their child’s journal.

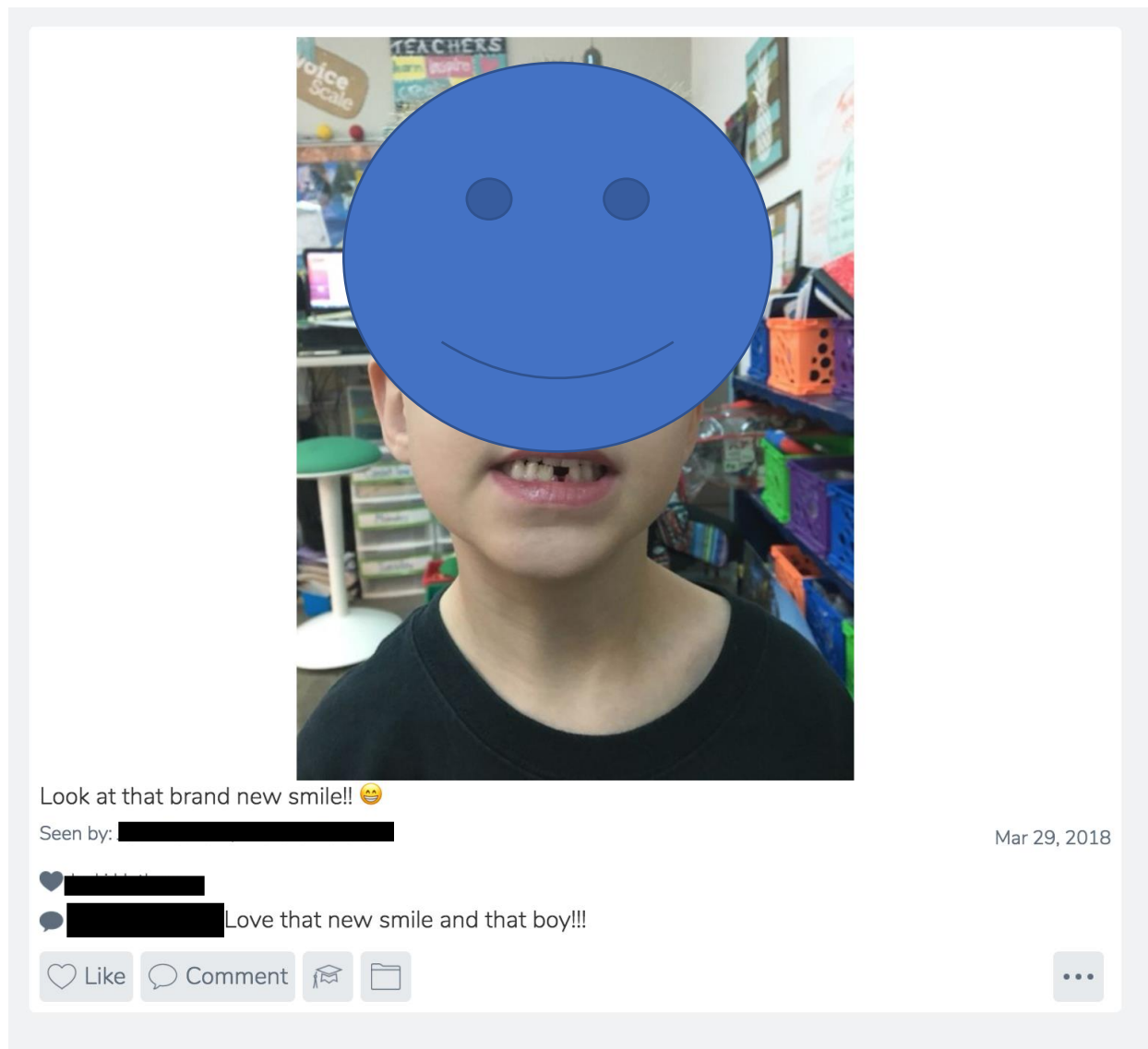
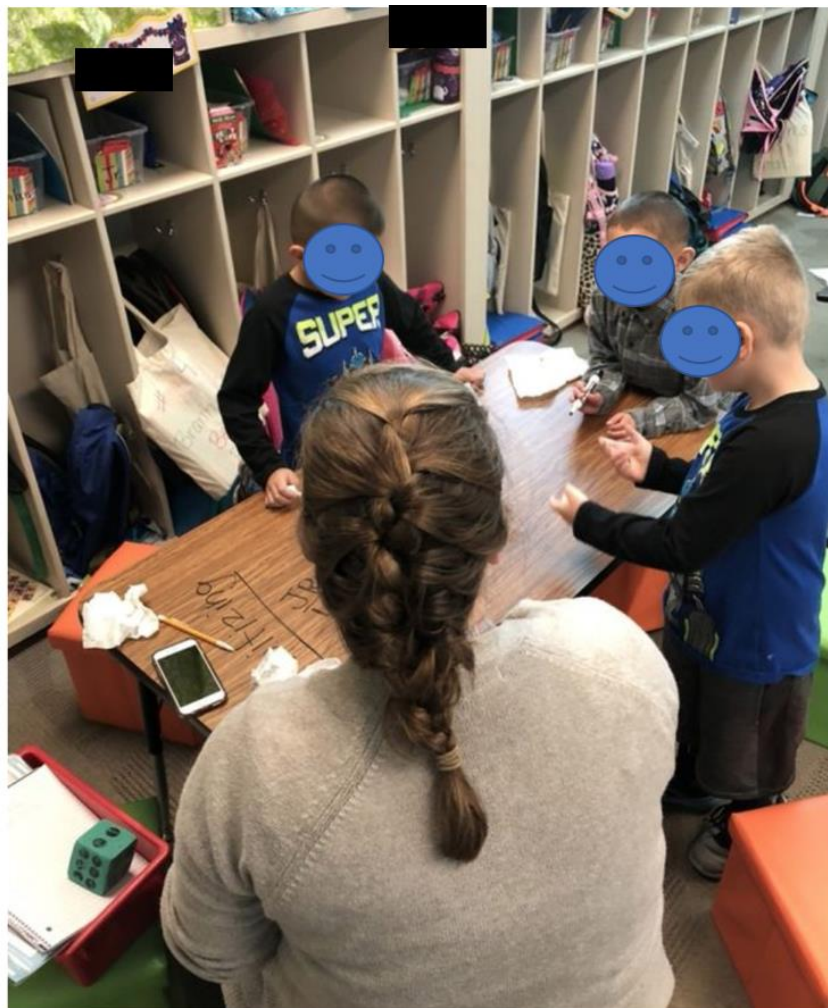


Figure 1. Communication with Blakeson's grandmother through a *Seesaw* post in his journal.

Getting a Peek into the School Day

Almost every day during the data collection period, my co-teacher, Mrs. Phalange, and I posted pictures or videos of students for the sole purpose of sharing class activities with parents. Throughout interviews with parents, appreciation for getting to see what happens in our classroom during the day was expressed frequently. As Mrs. Johnson said in her interview, many parents liked "being able to see the little things that are happening every day in the class." Mrs.

Standish said, “it helps us to know what’s going on and helps us get more involved with what she’s doing day to day when we’re not with her.” This was especially important to Mrs. Johnson who mentioned having a hard time transitioning to her son being at school all day instead of at home with her. For her and other parents in similar situations, seeing picture and video updates of their students at school helped ease their worries about sending their children to school for the first time.



Man small groups with Miss Ryan

Seen by: [REDACTED]

Mar 1, 2018

Math

Figure 2. Picture of class activity posted in *Seesaw* to keep parents informed.

Parents also enjoyed getting a look into our daily activities in order to stay up-to-date on student progress and behavior (see Figure 2). Mrs. Johnson and Mrs. Lovegood both enjoyed being able to track their students' progress as shown through pictures and videos of their work, as well as notes from teachers about achievement. Mrs. Standish mentioned multiple times through her interview that *Seesaw* allowed her to hold her daughter, Lindsey, accountable for her actions at school because she was aware of what was happening during the day. To address behavior issues, Mr. Chiamaka shared Rayda's pictures and videos with her and together they analyzed her behavior to pinpoint anything that needed correcting (see Figure 3). In fact, Mr. Chiamaka's suggestion to me was that Mrs. Phalange and I should post more about specific behavior issues so that he could better address them at home.



Figure 3. *Seesaw* post about a classroom behavior issue asking for support from parents.

From the teacher perspective, it was important to my co-teacher and me that we posted frequently enough that the parents on *Seesaw* got an accurate idea of what actually happens in the classroom day to day. We wanted parents to have an understanding of the class routines, rules, and procedures to support these at home, and we wanted parents to see that *Seesaw* was not filled with staged pictures and videos but gave an accurate portrayal of what was really happening in our classroom. In regard to how Mrs. Phalange decided what to post on *Seesaw* for parents, she said, “I just think it’s great to show parents how we just go about our day, so I’ve been careful to post things of our morning routine, little quick things at rest time sometimes.”

Sharing progress and concerns with parents in real time was important to us as teachers as well. Frequent communication with parents about student progress was a much more effective way for parents to best support their students in ways that led to success because they had a better, more up-to-date idea of what their students’ struggles were as well as how far they’d come. Mrs. Phalange said, “when I say she’s reading so well, I can say that and maybe they’ll understand those words from me, but that is so much different than a video of her standing up and reading to her friends with confidence. That’s a totally different level of sharing.” Overall Mrs. Phalange noticed that with the use of *Seesaw*, parents had a much deeper understanding of student progress than she has ever experienced before.

My interview with Mrs. Phalange also revealed that part of her motivation when posting in *Seesaw* was to make sure parents were aware of any injuries, illnesses, and behavior issues at school (see Figure 4). Because *Seesaw* is immediate and can be done anywhere there is an internet connection, she was able to share updates on students’ wellness and behavior in real time, which was especially important when it came to time-sensitive issues. Overall, *Seesaw* allowed us to share a much broader picture of how our classroom functions, which helped us

garner more support for students in all areas of their lives while at school than Mrs. Phalange had ever seen prior to the implementation of *Seesaw*.



Figure 4. A *Seesaw* post created to inform a parent of a student injury.

Communicating Effectively with Hard-to-Reach Parents

Throughout our conversations at the beginning of the school year, Mrs. Phalange revealed to me that parent-teacher communication had consistently been one of her biggest struggles over the years. This is partly why she was so eager to give *Seesaw* a try. In her interview, she reflected on her previous experience with parent-teacher communication and the challenges she faced. Her biggest hurdle in regards to parent-teacher communication was

summed up with one word: “accessibility.” As she mentioned in her interview, some parents are hard to get in touch with because of the busy lives they lead, with some parents working multiple jobs simply trying to make ends meet. Other parents are hard to connect with because of language barriers. Both of these burdens were alleviated for the most part since implementing *Seesaw*.

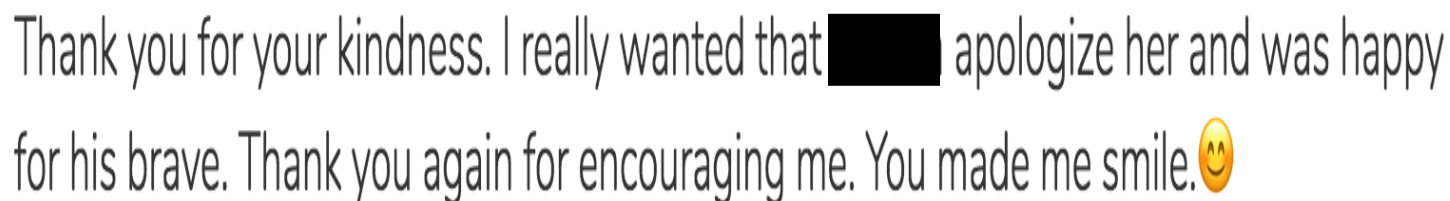
When it came to parents who worked long hours or multiple jobs, *Seesaw* was the perfect way to reach out. They were able to communicate with us at their convenience without the pressure of having a face-to-face conversation, which is sometimes difficult to arrange with a busy parent. Communicating frequently as facilitated through the *Seesaw* app forged meaningful relationships that formed parent-teacher partnership that proved to be quite influential when it came to the education of our students. This kind of partnership may not have been possible using only traditional methods like face-to-face conversations at pickup time, phone calls, or emails. Parents and family members who normally wouldn’t have the time or capability to be very involved were given the opportunity to participate in their child’s school experience in a unique way that didn’t require as much time of them.

Of all of the things that happened as a result of our implementation of *Seesaw*, the most powerful result was the impact its use had on our ability to communicate with parents with limited English proficiency. In the past, Mrs. Phalange struggled to communicate with parents with limited English because of lack of translators or lack of confidence on the parent’s part to reach out to teachers. After implementing *Seesaw*, Mrs. Phalange saw a huge improvement in the way she was able to communicate with English Language Learners and their parents; we were able to reach parents who might otherwise be left out. *Seesaw* helped alleviate the pressure related to face-to-face conversations for ELLs. Because there is a translation feature within the

app, parents were able to translate messages from teachers into their native language, which promoted better understanding between those parents and teachers. However, the downside to this as mentioned by ELL parent Mrs. Park is that the translations from the app were not always accurate, but she agreed that it was helpful in giving her an idea of what we were saying; it was a good starting point in the translation process.

Mrs. Park also discussed with me other reasons she preferred using *Seesaw* over other communication methods. She said that using the app was “comfortable and convenient” because she was able to take all the time she needed to gather her thoughts before reaching out or responding to teachers. She said that writing was easier than speaking for her and “listening is difficult, too,” so *Seesaw* fulfilled her communication preferences by allowing her to read and write at her own pace.

Mrs. Park and I formed a meaningful relationship despite our differences in language, and I believe I have *Seesaw* to thank for that (see Figure 5). In our interview, she told me, “when I talk to you, I’m more comfortable than some.” I reflected with her upon past conversations, telling her how much it meant to me when she messaged me to say, “Thank you again for encouraging me. You made me smile.” I was able to see her grow in confidence and ability throughout the school year through our private messages in the app. She and her son, Nabi-Yong, were an important addition to our class family and taught us a lot about their Korean culture. Mrs. Phalange summarized our mutual feelings about the use of *Seesaw* to communicate with ELL parents perfectly: “It’s meeting lots of needs in a really beautiful way. Taking videos of those kids reading and writing and talking to their friends and interacting with their friends has been huge, not just for their peace of mind, but because they’re entrusting their babies to us, and we don’t even speak the same language.”

A screenshot of a private message from Mrs. Park. The text reads: "Thank you for your kindness. I really wanted that [REDACTED] apologize her and was happy for his brave. Thank you again for encouraging me. You made me smile. 😊". The name of the person being thanked is redacted with a black box. The message is displayed in a light gray font on a white background, with a yellow smiley face emoji at the end.

Thank you for your kindness. I really wanted that [REDACTED] apologize her and was happy for his brave. Thank you again for encouraging me. You made me smile. 😊

Figure 5. Screenshot of a private message from Mrs. Park.

Pros, Cons, and Suggestions for Change

In each interview I conducted, I asked what the participant thought the pros and cons of using *Seesaw* were. Once those were established, we discussed how some of the “cons” could be improved upon in order to convert them into “pros.” While most comments about *Seesaw* were positive, it became clear through conversation with parents that there was room for the app to grow to fit parent and student needs.

Possible benefits. Countless benefits to using *Seesaw* to facilitate communication in the classroom were mentioned by parents and teachers. Some favorites in terms of *Seesaw*’s features include the “like” button, the translation feature, the private messaging, and the picture and video updates in the journal. Other benefits mentioned were the speed with which you are capable of communicating when using *Seesaw*, the depth of communication compared to other tools like newsletters, the security of the app when compared to similar apps like *Instagram* or *Facebook*, and the convenience of being able to communicate asynchronously from any location where internet is available.

Aside from the ability to keep up with students at school and communicate easily and meaningfully with teachers, parents appreciated that all parent-teacher communication, progress reports, and reminders were housed in the same place; there was no need to keep up with a pile of papers. Mrs. Standish said, “I like it in *Seesaw* because everything is there in one spot. I know I can go there and see all of Lindsey’s school stuff. It’s not co-mingled with my other emails, so

I do like that.” Mrs. Lovegood also discussed how she liked being able to go in *Seesaw* and know exactly what she would find; she didn’t have to sort through other posts to find the school-related ones.

In addition to these benefits, one benefit that I noticed that was not mentioned explicitly by parents is that the modes used in *Seesaw* aligned with what parents indicated their preferred methods of communication are. For instance, many parents preferred texting over phone calls or emails because of the immediacy of it. This aligned with *Seesaw*’s private messaging feature.

Possible drawbacks. Although the drawbacks to the use of *Seesaw* in the eyes of parents and teachers were relatively few, they are important things to think about and improve upon if possible. The most pressing concern shown in Mrs. Johnson’s interview in particular was the need for complete security and privacy. She admitted that she was hesitant to join *Seesaw* at first because of possible security concerns, but I was pleased to see that she became one of our most active parents on the app. When we talked about *Seesaw* in our interview, she was still a bit nervous about the use of something so similar to social media to keep up with her child in the classroom, but she was pleased by the security of the app.

Mrs. Lovegood mentioned in her interview that she was overwhelmed by the idea of *Seesaw* at first. Because she didn’t have any prior experience with the app and was what she refers to as “technologically-challenged,” the process of downloading the app, gaining access to our classroom, and learning to navigate the app was somewhat overwhelming to her at first. She posited that she may have been less overwhelmed had she been to Meet the Teacher Night where the app was explained in more detail, but there are still things that I feel I could do next time to make this a less overwhelming process for parents.

The only drawback noted on the teacher side of the app was that *Seesaw* was much more time-consuming than traditional methods of parent-teacher communication like occasional conferences, phone calls, or notes home. However, this was actually a concern mentioned more by parents than by Mrs. Phalange. In her interview, she did, however, note that *Seesaw* could be difficult to use to the extent to which we used it when there is only one teacher in the room: “I would honestly be more anxious about it myself trying to do it without you here, truly.” From my perspective, the time and effort needed to use *Seesaw* in the way Mrs. Phalange and I did was well worth the outcomes.

Possible improvements. While most parents gave *Seesaw* rave reviews, they were eager to share their ideas on how to make their experience with the app even better as well. Mrs. Johnson wished to be able to communicate privately with other parents to set up things like play dates and birthday parties. Mrs. Phalange expressed the desire to create a way for parents to share student progress and activities from home, as well. Other parents also mentioned the one-sidedness of the app, talking about how there were things that their students would love to share with us through *Seesaw* if they were able. Along the same vein, Mrs. Park suggested that *Seesaw* create a way for parents to attach files to private messages with teachers. This was especially important to her because of her limited English proficiency. She often had questions about various forms and letters sent home, and it would have been helpful for her to be able to attach pictures to support her language when asking questions.

After receiving these suggestions from parents, I actually wrote an email to *Seesaw* with a list of ideas for improvement. Soon after, an update of the app was released. The update included the capability to attach files to private messages from the parent and teacher end. After that, I received various pictures and videos from Mrs. Park and Mrs. Johnson of their sons engaged in fun activities outside of school (see Figure 6). It was a great way to get an idea of what our students experienced while at home, and I am excited to see how it can be used from the beginning of the school year in my own classroom.

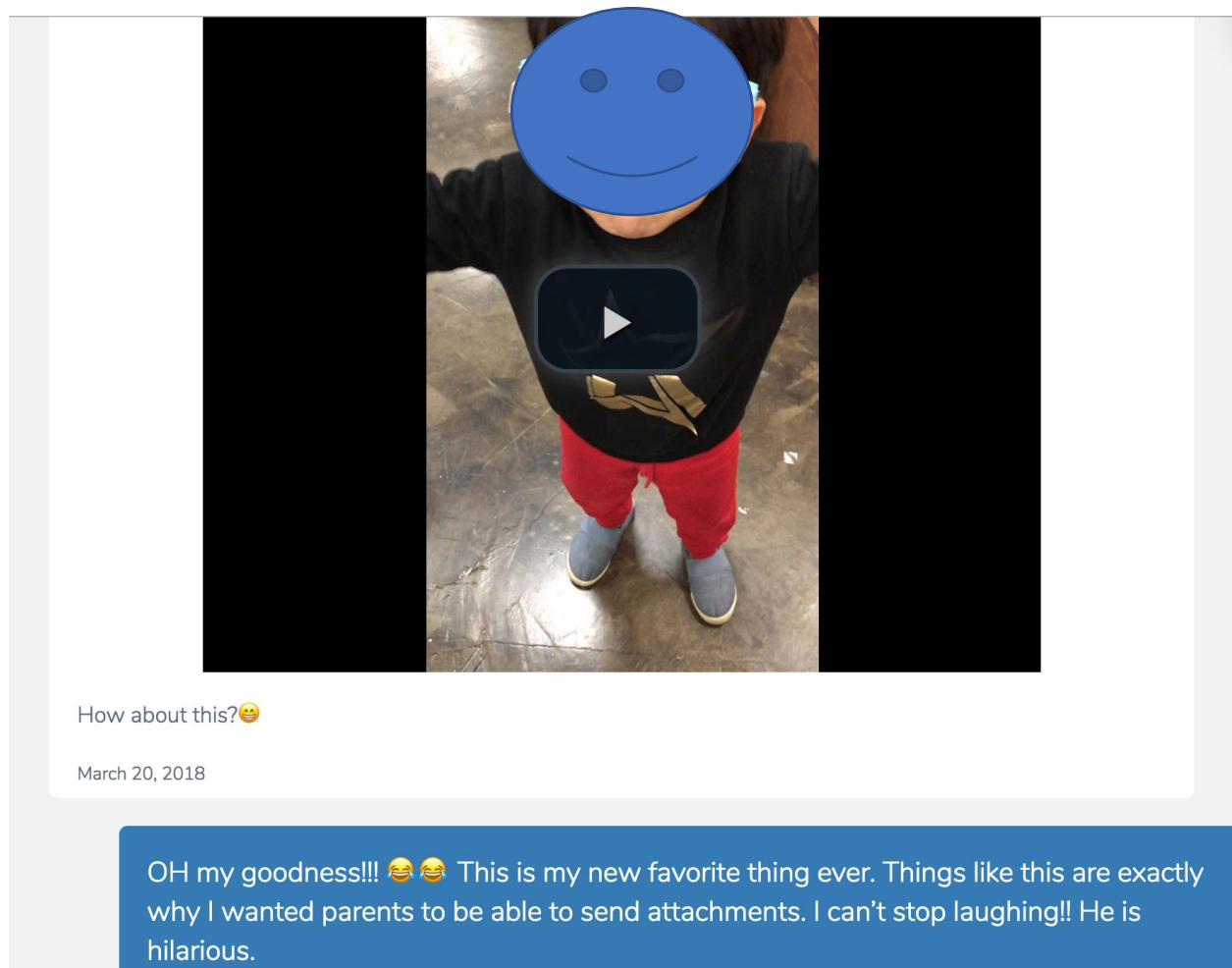


Figure 6. A screenshot of a video Mrs. Park sent me of her son Nabi-Yong through private messaging.

Implications for Teachers

As most teachers know, positive, frequent parent-teacher communication leads to more successful students (Kaiser & Rasminsky, 2017). However, many teachers like Mrs. Phalange may find communicating with parents the most challenging and nerve-wracking part of their job. It can be difficult to find a way to communicate with all parents in the class in a way that is convenient for both the parents and the teacher. This becomes especially true when working with families whose native language is something other than English or with families of a lower socioeconomic class who may work multiple jobs or long hours. From my previous experience, it seemed that many teachers had resigned themselves to thinking that they will never be able to communicate effectively with a wide range of parents. It's not that these teachers didn't believe that parents were worth communicating with or that they didn't care to, but they hadn't found an effective way to do so. After implementing *Seesaw* in our kindergarten classroom, I believe that this app may be a possible solution to this parent-teacher communication problem.

Implementing the use of *Seesaw* turned out to be a huge success for Mrs. Phalange and me in our kindergarten classroom. Parents were well-informed about what was happening in the classroom, which sparked meaningful conversations with children outside of school. Having the opportunity to talk to others about their experiences is important in solidifying their learning, and the conversation sparked by *Seesaw* between parents and students filled this need well. Conversations about what happened during the school day helped students expand their thinking with parents at home, thus helping them learn things more deeply and in a way that they will likely remember. This is just one of the many reasons teachers should consider using *Seesaw* in their classrooms.

Using *Seesaw* easily facilitated frequent, quick communication with parents. Time-sensitive issues could be addressed immediately through the app in a way that isn't typically possible through email. The private messaging feature of *Seesaw* is essentially the same as text messaging and could be easily replaced with texting, but I personally preferred the idea of private messaging within the app. First of all, using the app to send any necessary messages means that all communication is housed in the same app. Using *Seesaw* for private messaging needs also allows teachers to keep their cell phone numbers private. Lastly, for some parents, using the private messaging feature of *Seesaw* may be more comfortable because it is more professional; we are not communicating phone-to-phone and there is no chance of parent-teacher messages being mixed in with other messaging threads. Because communication through the app was quick and asynchronous, working parents were able to join in on the classroom conversation at their convenience.

Perhaps the most important implication for teachers is the potential to communicate with parents of ELLs through the use of *Seesaw*. These parents are traditionally quite hard to communicate with because of language and cultural differences. However, *Seesaw* has the potential to reach these parents in their own language. The translation feature, while not perfect, provides a great starting point when it comes to understanding what is being posted or sent in a private message. Pictures and videos along with text also provide a great language scaffold for these parents that boosts their understanding. Because *Seesaw* communication occurs through parents' phones or computers rather than face-to-face, ELLs are able to take as much time as needed to understand posts or to craft responses without the added pressure of needing to translate on the spot.

There are many areas in which this study could grow. *Seesaw* has many more features and uses that were not utilized in our classroom because of time constraints, lack of available technology, and the age of our students. In many classrooms, *Seesaw* is used as a digital portfolio created by students. Parents are able to see their children's posts, and teachers are able to see the posts and measure student learning. For example, some teachers assign math problems to students and then have students take videos of themselves solving and explaining the problem. This would allow teachers to later watch the videos and gain valuable insight into students' thinking and misconceptions. *Seesaw* can be used as a tool for assessing and grading students as well because of the ability for students to post their work to the app. I'm left wondering what would have happened in our kindergarten class if we'd had the technology available for students to create their own posts on *Seesaw* for parents and teachers to see.

Another way in which this study could grow is by creating a comparison study to see what changes occur in a classroom through the implementation of *Seesaw* in a classroom. This was outside the scope of my research, but it would be interesting to see what communication between parents, teachers, and students is like using *Seesaw* directly compared to using traditional communication tools like notes, emails, and phone calls with the same class. It would also be interesting to see if this higher level of communication has an impact student success in the classroom.

While *Seesaw* could be seen as somewhat daunting because of the time involved and technology used, I feel that it is worth the effort put in. With *Seesaw*, I have been able to form valuable relationships with almost all parents in our class regardless of their schedule and language proficiency. It is already known that parent involvement in their children's schooling is a good indicator of their children's future success. Perhaps this study will help advertise the

possibility of using *Seesaw* to facilitate communication between parents, teachers, and students in a way that keeps parent involvement and teacher support high.

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Appendix A

Parent Survey

Name: _____

Names and ages of children: _____

Have you ever used *Seesaw* before? _____

Have you ever used technology to communicate with your children's teacher(s) before? (This could include e-mail, text messaging, other applications, blogs, social media, etc.) _____

If yes, what have you used? _____

Compared to other technologies you have used, how would you rate *Seesaw*?

a. worse

b. the same

c. better

What information on *Seesaw* do you find most helpful or enjoyable? _____

Which feature on *Seesaw* do you use the most? _____

Is there anything on *Seesaw* you find difficult to use? If so, what? _____

If you could change anything about the *Seesaw* application, what would it be and why? _____

If you could change anything about the way Mrs. Phalange and I use the *Seesaw* application, what would it be and why? _____

If you were a teacher, how likely would you be to recommend the use of this app to another teacher?

How often do you get on/check *Seesaw*?

Overall, how difficult is it to use *Seesaw*?

Very unlikely	Unlikely	Likely	Very likely
Less than 3-4 days per week	3-4 days per week	Daily	More than once daily
Difficult	Somewhat difficult	Fairly simple	Simple

Appendix B

Survey Response Summary

- 15% of parents (2) have used *Seesaw* before the 2017-18 school year
- 85% of parents have used other technology to communicate with teachers
- 91% think that *Seesaw* is better than using other technologies
- 0% of parents have difficulties using *Seesaw*
- 85% of parents are very likely to recommend *Seesaw* to another teacher
- 15% of parents say they get on *Seesaw* more than once per day
- 54% of parents say they get on *Seesaw* daily
- 23% of parents say they get on *Seesaw* just 3-4 days per week
- 8% of parents say they get on *Seesaw* less than 3-4 days per week
- 77% of parents say *Seesaw* is simple to use
- 23% of parents say *Seesaw* is fairly simple to use
- Suggestions for changes to the app:
 - The ability to talk one-on-one to other parents through the app
 - An update to fix bugs in the app that make the app crash
 - The option to save pictures and videos from the app
 - The ability to attach a file when private messaging a teacher
 - Automatic rotation of videos to make them bigger
- Other experiences with technology for parent-teacher communication:
 - Email
 - Text
 - Remind 101
 - Facebook
 - A Korean app similar to *Seesaw*
- Favorite features of the app:
 - Parent-teacher communication
 - Pictures and videos of class activities
 - Reminders from teachers

Appendix C

Interview Protocols

Parent Interview Protocol

1. Tell me about what you talk about with your child(ren) after school. How do you know what to ask/talk about? Is your child willing to tell you about what happens at school? Do they remember?
2. Tell me about any past experiences you've had with using technology to communicate with teachers. This could include email, phone calls, and phone apps.
3. What was your first impression of the *Seesaw* app? What did you expect from it?
4. Tell me about your experience using *Seesaw*. Is it easy to use? Do you enjoy it?
5. Do you share what is posted on *Seesaw* with your kids? Do you talk with them about the things posted? Tell me more about that.
6. What has it been like using the app for communication with teachers?
7. Compare any teacher communication experiences you've had without the use of *Seesaw* with this year's communication experiences. Have you seen any changes in the way you communicate with your child's teacher or in the way you communicate with your child?
8. What are the benefits you see with the use of *Seesaw*? Negatives?
9. If there were anything you would change about the app itself or the way the app has been used in our class, what would it be?

Questions may vary. Additional questions may be asked depending on answers participants give.

Student Interview Protocol

1. Tell me about what you talk about after school with your family. Do you talk about what you did at school?
2. What part of your day do you usually tell your family about?
3. How do you decide what to tell your family about? (Everything you remember? The most fun? Something interesting you learned? A funny story? Something bad that happened? Whatever your family asks you about?)
4. Tell me about what you know about *Seesaw*.
5. Tell me about what your family uses *Seesaw* for.
6. Why do you think I use *Seesaw*? What is it for?
7. Does your family ask you questions about things they see on *Seesaw*? If so, what do they ask? Do they show you what is on there?
8. If you were the teacher, what would you put on *Seesaw*?
9. If you could post your own pictures or videos on *Seesaw* for your parents to see later, what kinds of things would you post?

Questions may vary. Additional questions may be asked depending on answers participants give.

Teacher Interview Protocol

1. What is the hardest part about parent communication for you? Why?
2. Before implementing *Seesaw* this year, what was your parent communication like? What were the biggest challenges?
3. What was communication with parents who did not speak English as a first language like?
4. With your own children, what has parent communication been like? What would you change about it?
5. Tell me about what your first impression of *Seesaw* was.
6. Why did you decide to implement the use of *Seesaw* in our classroom this year?
7. Describe what you have used *Seesaw* for in the classroom.
8. Tell me about what changes, if any, you have seen in parent communication since implementing *Seesaw*. Positive changes? Negative changes?
9. Compare communication with ELL parents before implementing *Seesaw* to communication facilitated through *Seesaw*.
10. Describe the benefits you see with the use of *Seesaw*. Negatives?
11. If there were anything you would change about the app itself or the way the app has been used in our class, what would it be?

Questions may vary. Additional questions may be asked depending on answers participants give.

Appendix D

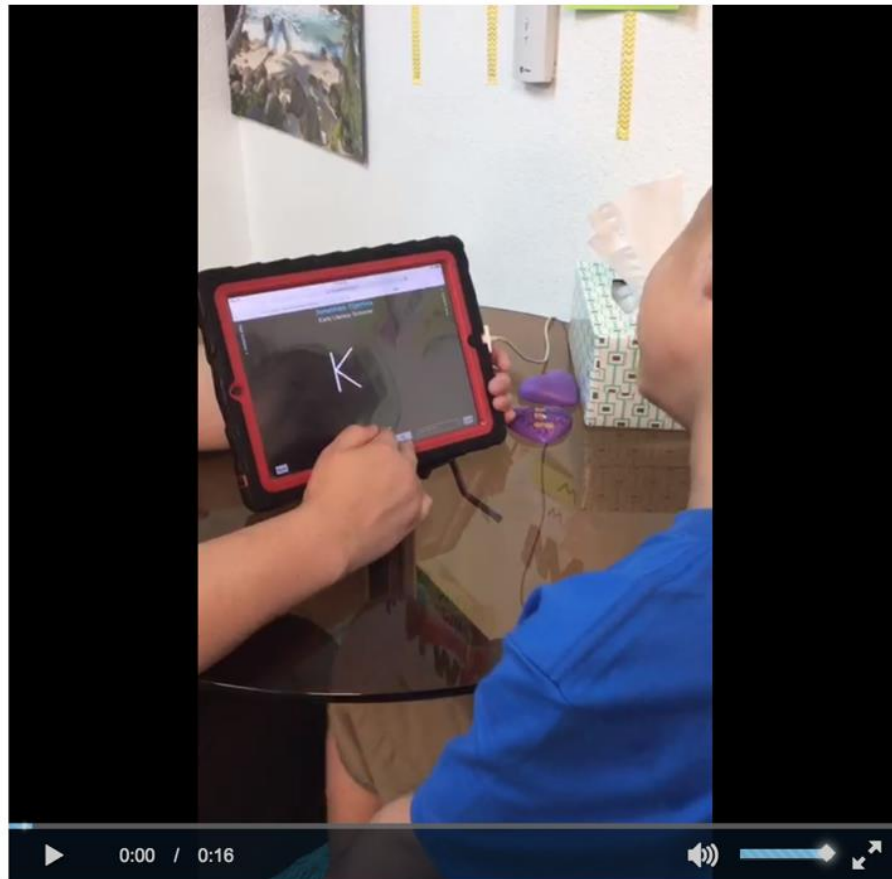
Classroom Journal Entry Example

February 26th

No mention of Seesaw in class.

- Used Seesaw to post a SignUp Genius to ask for parent volunteers at an upcoming event as requested by a parent.
 - "Hi, Beach Bum families! We are looking for volunteers to work a 30-minute time slot at our upcoming Spring Fling, Saturday March 3, 2018 from 12:00-4:00p.m. at the Mills Doghouse. Sadly, we only have ONE volunteer so far! If you are able to help out, please sign up for a time slot using the website below. Website: <http://www.signupgenius.com/go/10c054aaba923a31-mills>. Thank you in advance for your help!"
 - Liked by Luna
 - Used Seesaw to post a reminder about the kindergarten program occurring the following day
 - "As you probably know, tomorrow is the kindergarten music program! I was informed today that the kids are supposed to wear blue tomorrow, so I wanted to remind you to send your kiddos in blue! Mrs. Phalange and I are going to bring some extra blue T-shirts, so don't worry if you don't have one! Hope to see some of you there tomorrow!"
 - Liked by Kylie, Mackenzie, Luna, Comma
 - Comment from Luna: thanks for the reminder
 - Used Seesaw to post a picture of the Warm Fuzzy jar to inform parents that the students won a prize for behavior
 - "We filled up our warm fuzzy jar today!! check back tomorrow to see what the class prize will be!"
 - Liked by Kylie, Mackenzie, Luna, Mr. Mrs. Chiamaka, Claire
 - Comment from Luna: 🗡️🗡️🗡️ and 🗡️🗡️🗡️!!! (how boring that there's only one needle! Can't wait to find out!
-
- Comment from Ali: Luna...I'll be real honest...I had to think about that for a little bit. But now that I get it, I applaud you for your emoji use. Impressive. It's gonna be gooooooood!!!
 - Comment from Mackenzie: Way to go beach bums!!
 - Comment from Luna: I like being difficult to figure out. 🤔 it helps me feel clever and relevant. 🤔🤔

- Used Seesaw to post a video of a student being tested on letters and sounds
 - "Y'all. Mrs. Phalange and I were, like, crying the whole time he did this. We are so proud of [redacted] progress!! #icanteven
 - Liked by Regina, Brad, Shellie
 - Comment from Regina: So so proud of Alex!!!
 - Comment from Brad: This is so awesome!!



Y'all. Mrs. [redacted] and I were like crying the whole time he did this. We are so proud of his progress!! #icanteven

Seen by: [redacted]

Feb 27, 2018

Reading



[redacted] So so proud of [redacted]!

[redacted] This is so awesome!!

Appendix E

Codebook

Code	Level	Definition	Example
Parent-teacher partnership	Level 1	This code is used when the importance of parents and teachers working together is mentioned.	“Seeing parents as your friend and partner in education of these kids is everything.”
Communication with parents of ELLs	Level 1	This code is used whenever discussion of parent-teacher communication is specific to parents of ELLs. This could include the parents themselves talking about communicating as an ELL.	“That’s the hardest part. Translators aren’t always easily available and then they cannot be impulsive, quick little chats at the parent pickup, you know, like you can have with your strong English-speaking parents, so it’s definitely a struggle.”
Parent-teacher communication challenges	Level 1	When this code is used, it highlights the challenges involved with communicating between parents and teachers. This could be from the parent or teacher perspective.	“So, I just feel like it’s hard. Especially, it seems, the ones who are strapped for time and money and all those things, they’re just busy, busy, hardworking people that are hard to drag into school to talk.”
Student knowledge of Seesaw and its uses	Level 1	This code is used to highlight the knowledge students have of the Seesaw app and how it is used by parents or teachers.	“You look at the pictures of what we did at school.”
Student use of Seesaw	Level 1	This code is used when students are describing what they would use Seesaw for if they had access to it.	“What kind of stuff would you take pictures and videos of?” “How good I feel.”
Overwhelming at first	Level 1	When participants indicated that they were overwhelmed by the idea of using Seesaw, I used this code.	“So yeah, I really like it, but at first it was just kinda weird, and we were overwhelmed with school ‘cause we were homeschooling before, and then we had to put two in school, and then we had like all this stuff coming at us, and I was like, ‘ugh!’”
Communication preferences	Level 1	This code is used to highlight discussion of participants’ preferred modes of communication (email, text, phone call, Seesaw, etc.).	“Email works great for me, but a text would be nice for in the moment.”
“I like it in Seesaw because everything is there in one spot”	Level 1	When participants mentioned that they liked that Seesaw housed many different aspects of communication, this code was used.	“I like it in Seesaw because everything is there in one spot. I know I can go there and see all of Lindsey’s school stuff. It’s not co-mingled with my other emails, so I do like that.”
Holding students accountable	Level 1	This code was used when a parent or teacher talked about the desire to hold	“I think it does hold her accountable because she knows that we know all the

		their students accountable for their actions at school.	time, so she's not gonna be able to run one by us."
Using Seesaw as a parent-teacher communication tool	Level 1	This code is used when a participant discusses using Seesaw primarily as a way to communicate between parents and teachers.	"I think, honestly, what's been posted on Seesaw is a good conversation starter 'cause we know what's going on, and we're like, "oh, I saw that you did this or that y'all are doing this in class."
Seesaw's features	Level 1	This simple code is used whenever Seesaw's various features are mentioned by parents, teachers, or students.	"Yeah, you can change it. I've just changed it to where they don't email me except for the messages. When they do the message, I think I get some kind of notification."
"It's really easy"	Level 1	When participants talk about the ease with which they use Seesaw, I used this code.	"I was very, very impressed with how easy it was to use. it wasn't a very steep learning curve. It was pretty straightforward."
"I liked the reminders"	Level 1	This code is used when parents mention their feelings about teacher use of Seesaw to send reminders to parents.	"I am so glad as a parent that I have those reminders and a place that I can go to be like, 'oh wait, what am I supposed to do?' I like having that. I think I like that better than getting paper handouts sent home."
Getting to know other kids	Level 1	This code is used when a parent mentions how they like getting to know other kids when in the classroom or through Seesaw updates.	"I love being able to get to know the kids when I come into the classroom and then also seeing their progress, if that makes sense."
Getting an accurate idea of what happens in the classroom	Level 1	When participants mention their desire to get an accurate view of what goes on in the classroom through Seesaw, this code is used.	"In person coming in and seeing how the class responds to each other and works together is, you know, is the same as seeing it in the video, so, like, the video's not staged."
"Learning doesn't stop when they get home"	Level 1	This code highlights the times that participants mention learning that happens outside of the classroom.	"But that's the application process at home, you know? Here, they learn it, and to me that's a big—that's a whole other conversation."
Time-consuming for teachers	Level 1	Whenever it is mentioned that the use of Seesaw is time-consuming or tedious for teachers to use, this code is used.	"I'm sure you guys would be inundated with pictures and videos and all this other kind of stuff."
More direct and quicker response	Level 1	This code is used when participants discuss how Seesaw makes them feel like they are getting a quicker or more direct response than they would get with other modes of communication.	"I can email you the questions, but I feel like I get a more direct and quicker response to questions that I need."
Suggestions for changes to Seesaw	Level 1	Whenever a change in the way the Seesaw app is used or the Seesaw app itself is mentioned by parents, students, or teachers, this code is used.	"There have been a couple of times where I've taken a picture of Clayton at home doing something like writing his Christmas list or building something

			really cool that maybe he wanted to show you guys.”
Previous experiences with parent-teacher communication	Level 1	This code is used to highlight any instances where parents, teachers, or students discuss their previous experiences with parent-teacher communication.	“I used to send out more emails than I do now that I’ve done Seesaw. It’s really kind of balanced out between email and Seesaw communication, but before Seesaw, I was definitely emailing maybe more often.”
Security concerns	Level 1	Whenever a parent or teacher mentions their concerns with Seesaw in regards to the security of the app, this code is used.	“I was hesitant about Seesaw because I was worried about the privacy. I was worried about how it would be used, how it could be used, and about the security of it.”
Inclusion of other family members	Level 1	This code is used whenever it is clear that other family members are included in conversation about school because of Seesaw. “Other family members” included anyone beside the parent actually using the app, meaning it could include their children, aunts and uncles, grandparents, siblings, or another parent not on the app.	“So he’ll have it ready for him to watch, and sometimes I’ll send it to his—‘cause his dad didn’t sign up for it, it was just me—so I’ll, you know, I’ll download it to my phone and send it to his dad, and, you know, I mean then that gives them something to talk about when he gets home.”
Using Seesaw to track progress	Level 1	This code is used when a participant mentions the desire to track progress of students through Seesaw or when a participant mentions that they are using Seesaw for this purpose already.	“I’m not up here, and it’s neat to see them going through that learning process, and, you know, even this sounds really silly, but at the very beginning, you know, some of the videos, the kids were a little more timid.”
“We didn’t do anything”	Level 1	This in-vivo code is used when a parent discusses difficulties having a conversation with their children about their school day because they might claim that nothing happened at school.	“Well, mainly one of the first things I ask is, you know, ‘what did you do in school today?’ and I get the ‘oh, we didn’t do anything,’ so I kinda follow up, ‘oh well really? I sent you to school for 8 hours and you did nothing?’
Using Seesaw to inform parents of student progress	Level 1	This code is used in the classroom journal whenever teachers used Seesaw to share a student’s progress with a parent through pictures or video.	“Y’all. Mrs. Phalange and I were, like, crying the whole time he did this. We are so proud of his progress!! #icanteven.”
Using Seesaw to send a note to a student/parent	Level 1	Whenever it was indicated in the classroom journal that a simple note was sent to a student or parent through Seesaw, this code was used.	“We missed Lindsey today at school! Hope she’s feeling alright and that we get to see her tomorrow!”
Using Seesaw to remind parents of	Level 1	This code was used in the classroom journal to indicate a time when teachers used Seesaw to remind parents of an	“As you probably know, tomorrow is the kindergarten music program! I was informed today that the kids are supposed

upcoming events		upcoming event that they have already been informed of before.	to wear blue tomorrow, so I wanted to remind you to send your kiddos in blue!”
Perceptions of Seesaw from a parent not on Seesaw	Level 1	This code is used to signify a time when a parent who is not signed up on Seesaw discusses the app.	“While picking up her son, a parent mentioned her intent to join Seesaw because she believed she would enjoy using it to see what her son is doing in class.”
Using Seesaw to inform parents of a behavior issue and ask for support	Level 1	This code is used in the classroom journal whenever a teacher posts about a behavior issue in the classroom asking for support in resolving it at home.	“We would love for you to talk to your Beach Bums about blurting at home to support our efforts to teach without so much interruption. Thank you!”
Perceptions of Seesaw from a distant parent/relative	Level 1	Whenever a distant parent or relative discusses their feelings about Seesaw, this code was used. This included parents on the app that are distant from their children geographically or emotionally.	“Received an email from Nabi-Yong’s dad regarding an incident. In the email, he also thanked us for consistently posting on Seesaw so he can keep up with Nabi-Yong even though he is far away (he is deployed).
Student mention of Seesaw	Level 1	This code is used in the classroom journal any time a student mentions Seesaw in class.	“At 1:30, Lindsey saw me taking a video of the class and said ‘Are you going to post that on Seesaw?’ I said ‘maybe!’ and shrugged. She grinned at me and said ‘Yup, you are.’”
Seesaw activity summary from the app	Level 1	This code is used to highlight the Seesaw activity summary, which was given by the app every Sunday. It tells which parents were active, how many things were posted, and how many likes and comments were received.	“19 new items, 40 likes, 11 comments, 30 parent visits (week of February 4-11).”
Using Seesaw to inform parents of upcoming events	Level 1	This code is used in the classroom journal whenever a teacher uses Seesaw to tell parents about an upcoming event that they were not aware of before.	“Hello again, families! I wanted to let you guys know about something fun Mrs. Phalange and I are starting tomorrow. It is called Teacher Turnaround Tuesday!”
Using Seesaw to respond directly to parent questions/needs	Level 1	This code is used whenever a post is made in direct response to a parent question or need.	“Posted a picture of the lunch menu for February for a parent who lost theirs.”
Parent-teacher communication directly related to post	Level 1	This code is used in the classroom journal to highlight commentary between parents and teachers that is directly related to the post they are commenting on.	“‘Was he good teacher?’ ‘Haha yes! He went slowly and repeated things for me A LOT.’”

Using Seesaw to gather information from parents	Level 1	This code is used to highlight the times teachers used Seesaw to gather information from parents through private messages, outside links, or Seesaw posts.	“Hello, Beach Bum families! You are receiving this link because I would LOVE to interview you about Seesaw for my research.”
Using Seesaw to share class activity with parents	Level 1	This code was used frequently to indicate when Seesaw posts were posted primarily to share class activities with parents.	“I asked if someone wanted to read the book to the class, and Nabi-Yong was the first to raise his hand! He did such a great job. I am so proud of him for being brave enough to read in front of his friends, and I am proud of his friends for being such great listeners. They were so excited for him, too!”
Pros and Cons of the use of Seesaw over previous methods	Level 1	Whenever a participant discusses the benefits or negatives to using Seesaw compared to other methods of communication, this code is used.	“I like the ability to ‘like’ and do the heart. If anything, it shows who’s seen it and not only who’s seen it, because it shows you who has seen it in addition to the heart, additionally who it resonated with.”
Getting a peek into the school day	Level 2	This level 2 code combines many codes to include any mention from parent, teachers, or students of getting to see what children do during the school day. This includes getting to see the school day to know what kids are doing away from home, knowing what happens so parents can hold students accountable, or seeing what happens in order to measure progress.	“But yes, to be able to share their progress with them in real time and a video of their progress. When I say she’s reading so well, I can say that and maybe they’ll understand those words from me, but that is so much different than a video of her standing up and reading to her friends with confidence. That’s a totally different level of sharing.”
Opening up the line of communication	Level 2	This level 2 code is used whenever a participant discusses being able to communicate more freely with others because of the Seesaw app. This includes parents being able to talk to teachers more freely or comfortably or vice versa, or parents and their students being able to have more meaningful and free conversations and vice versa. Also included are the ways in which teachers use the app to open up communication, like sending a note to parents or students, informing parents of upcoming events, etc.	“Oh, yeah, definitely. We see a lot of things. Y’all are pretty good about posting most every day, so we see at least something she did that day, and that sparks a better conversation than asking the open question, ‘What did you do today?’ and actually get into some of it. It’s easier for them. It opens up the line of communication.”
Pros, cons, and suggestions for change	Level 2	This code is used whenever participants discuss things they like or dislike about the app (security concerns, ease of use,	“But, yeah. I’ve said before, and parents have said before that they wish they could put up pictures, and I get that, I like that,

		reminders, time-consuming for teachers) or things they wish would be different about the app itself or the way the app is used (parent ability to send pictures, rotation of videos, etc.).	but at the same time, I get the reason not to do that. That would be a lot more to manage on our side of it. We would have to preview that content before we were okay with it going out under our name.”
Communicating effectively with hard-to-reach parents	Level 2	This level 2 code doesn’t include as many level 1 codes as the others, but it is an important section when it comes to answering my research questions. It includes any instance when a participant discusses how Seesaw helps facilitate communication with parents who are typically harder to reach, like working parents, distant parents, and parents of ELLs.	“We have one at the beginning of the year whose English was very limited, and he was scared to come to school, and this is gonna make me cry, but when he was all of a sudden fast friends with our friend Hailey and he just seeing them together and him helping her and her helping him tying their shoes when neither of them could tie. I just know that seeing that picture had to have put his parents at ease.”